Nebraska Information Technology Commission
Community Technology Fund 2001

Application Form

Section I: General Information (Required)

A. Project Title: KCH Clinic Integrated Practice Management/Electronic Medical Record Project

Name of Submitting Entity:	Kimball County Hospital Clinic
Project Contact Information:	
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B. Certification for Request

I certify that to the best of my knowledge the information in this application is correct and that the application has been authorized by this entity to meet the obligations set forth in this application.

Authorized Signature: _____

Typed Name: Kim Woods

Title: Chief Executive Officer

Name of Entity: Kimball County Hospital

Date: February 05, 2001

Total State Funds Requested: $57,500

Contact information regarding this form:

Office of the NITC
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Lincoln, NE 68508
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Section II: Executive Summary (Required)

This project will address many of the needs involved in providing health care in our rural community and serve as an example for other rural communities. Rural areas must harness the power of technology in order to survive. Patient frustration, lack of trained staff, recruitment and retention of quality health care providers, increasing federal regulations, lack of financial resources and employee turnover/job burnout are only some the challenges that exist today in rural health systems.

In order to move forward toward our vision of an integrated health-care delivery system in our area, we must first create our own, quality infrastructure. This includes our vision of an integrated practice management/electronic medical record system for our clinic, access to such from our hospital system, and eventually the ability to integrate with our regional hospital to facilitate a better patient experience. By automating many processes we can reduce and/or eliminate input errors, misplaced messages, and lost charts. We can also automate health maintenance reminders, increase times available for appointments, and reduce dictation and transcription costs. Compliance with federal regulations will also be enhanced by allowing us the ability to limit access to the patient record, assisting with coding, and will provide us with meaningful quality improvement data.

This project will also increase employee satisfaction as they will have more time available for the patient, rather than filing mountains of paper, searching for charts, calls to the pharmacy, etc. Our medical providers will have access to the Internet for continuing education courses, research, and patient education materials. Patient satisfaction should increase with reduced waiting times, streamlined operations, and happier staff. Financial outcomes should improve with the ability to file all claims electronically and additional patient visits.

We will be working with our regional hospital, Regional West Medical Center, and Kimball County Hospital to integrate this system with the existing systems in place.

Section III: Goals and Objectives (Required)

The project objective is the successful implementation of an integrated practice management/electronic medical records solution in our clinic. Our specific goals include, but are not limited to:

1) Installation of local area network with a wide area network to hospital and RWMC

2) Reduce days in accounts receivable to under 60 days

3) Improve the prescription refill process

4) Reduce patient waiting times

5) Eliminate costs involved with paper charts—setup, filing, locating, pulling, re-filing

6) Reduce dictating and transcription costs

7) Improve quality of care through clinical guidelines

8) Improve patient satisfaction with billing

9) Increase provider productivity and satisfaction

Kimball County Hospital has a comprehensive technology plan that is reviewed annually and updated as needed. The hospital's management team, medical providers, and members from the Board of Trustees have developed an overall strategic plan that includes technology as a fundamental cornerstone for our success. The Kimball County Hospital overall technology plan includes:

Clinic

- Medical records – transition from paper to electronic records. Rationale: Compliance issues, patient care, charge capture, better staff utilization and information analysis. Options: wireless network, laptop hardware for providers and nurses.
- New practice management system – transition from Medical Manager to integrated solution on a local . Would prefer to link to old system for patient data re-entry or manual re-entry on second machine. Also use for appointment scheduling.

Hospital

- Set up remote access between Hospital Laboratory and Regional West reference labs for order entry and report printing.
- Set up access for Hospital Admissions office to Regional West patient database to verify correct patient information for transfers and referred testing.
- Upgrade and replace hospital network, i.e. file server and operating system
- Select and install new non-proprietary communication system

Long-Term Needs

- Method to share information between hospital and clinic patient information systems
- Evaluate alternatives to individual outside business phone lines, i.e. T-1 voice channels
- In partnership with our regional hospital, we will transition from paper records to an electronic Care
- Manager product for hospital documentation

The project specifically supports the following goals of the NITC and the priorities of the Community Council as
follows:

NITC-1

- Kimball County Hospital is governmental subdivision. The project will improve efficiency and effectiveness for the organization as a whole through the elimination of tedious and time-consuming activities such as pulling charts and filing mountains of paper, while at the same time enhancing patient satisfaction.
- The project will enhance the health care services available to the Nebraska communities and citizens of Kimball, Banner, and western Cheyenne counties. Increased productivity will allow more visits/per day/per provider to ensure that everyone who needs medical care can receive it.

NITC-2

- The project will allow us to reduce costs in dictation, transcription, and ineffective labor as well as enabling us to create support networks within our local hospital as well as the region. Several peers share the same frustrations and limitations as we do, and we will serve as a model and support system for them.
- It will encourage collaboration between health-care providers in our area, physicians, hospitals, home health networks, pharmacists, etc., as we work to eliminate the barriers and/or obstacles they face because of our internal processes.

NITC-3

- It will encourage the appropriate use of information technology in healthcare by our ability to limit access to patient records while allowing medical providers access from several locations—emergency room, clinic, other hospitals, and by allowing providers more time to spend with patients, rather than the overwhelming mountains of paper.
- It will certainly help to reduce the burden of cumbersome regulations involved in billing, coding, and privacy, and assist us in complying with these mandates. It will also allow for a mechanism by which we can monitor and improve patient outcomes—clinically, administratively, and personally.

Community Council

- We currently ensure access to our services regardless of impediment. By enhancing our financial position, it will ensure that we remain viable to serve all the citizens in our service area.
- This project will allow us to develop a workforce knowledgeable of, and fluent in, the use and applications of information technology. By mandating training and knowledge in order to perform their jobs, we will ensure that all staff are brought into the information age, thereby increasing their ability to utilize technology in their personal lives, etc. It will also allow us to have the infrastructure and tools in place to perhaps implement school-to-work programs for high school students interested in "interning" with our IT department.
- We intend to be a "community model" of the ways in which technology allows us to move forward and prosper, regardless of location, and that groups and systems working together will go much farther than if alone.

Section IV: Scope and Objectives

1. Beneficiaries of this project include the citizens of Kimball, Banner, and western Cheyenne counties in Nebraska, northern Weld county in Colorado and eastern Laramie county of Wyoming, our community health-care providers including home health, hospital, pharmacists, physicians, physician assistants, nurses, and all staff. By having a local area network with Internet access, we can provide online education for all levels of staff. The distance and cost involved with sending staff to off-site locations for education is cost prohibitive and unavailable. By having online access, it will allow us to train and review our staff as needed, when needed, and at their convenience.

2. Expected outcomes of the project include a fully deployed electronic medical record, reduction in costs and increases in efficiency, better patient satisfaction, on-line access to the Internet and our regional hospital, and improved financial outcomes.

3. We will measure our success by achieving a paperless office, improved cash flows, a reduction in accounts receivable days, and improved patient satisfaction measured by patient surveys.

4. No significant constraints of the project have been identified.

5. We are making the assumption that we will not have major employee turnover during the project.

Section V: Project Justification (Business Case)

Justify the project either in terms of an economic return on investment or other benefits to the entity or the public. The narrative should address the following:

Cost/benefit analysis:
Monthly:

New file folders/new patient at $3.00 chart, 50 new patients/month	$ 150.00
Handling of paper charts 50 pts/day for 5.5 days/week over one month @ $4.00	$ 4,400.00
85% reduction in transcription costs	$ 2,125.00
Pulling charts for prescription refills, messages, etc. 20/day @$4.00	$ 440.00
Estimated monthly savings	$6,965.00
Less monthly support costs	(800.00)
Net estimated monthly savings	$6,165.00

The majority of these savings are intangible in that the time and dollars saved in pulling, re-filing paper charts will not reduce out of pocket costs as we do not anticipate reducing staff, however, we will be able to see more patients per day, and staff will have time to enable them to provide value added services for our patients.

An example is the prescription assistance program. Many pharmaceutical companies offer free or reduced costs to those who cannot afford their medications. However, it is a labor intense process and most patients are not equipped to help themselves. We intend to have staff facilitate the process. The reduction in dictating and transcribing time will allow more time for the providers to see patients, thus improving productivity and patient satisfaction. We will have the ability to monitor patient waiting times and the time it takes to move the patient through the system, thus allowing us to improve performance by identifying and removing bottlenecks and improving processes.

One solution that was evaluated, and then eliminated, was to move to a new paper charting system as a transition step. However, we decided that would be a waste of time, effort, and resources as our ultimate goal was to be electronic. Doing nothing is NOT an option. This project addresses several quality improvement areas we have identified, many tied to compliance issues. This solution has been chosen as the vehicle we will use to address these items: patient satisfaction, documentation requirements, prescription refills, lack of space,

excessive days in A/R, and patient privacy issues. The project will help us achieve compliance with federal HIPPA requirements, as well as the E & M coding/documentation requirements mandated by HCFA.

Section VI: Implementation

The primary stakeholder in this project is Kimball County Hospital Clinic and our sponsor is Kimball County Hospital. We have been evaluating the needs of this department for over two years. The hospital's strategic planning process and our vision for the future have led to this project. We have received support for this project from the hospital management, the Board of Trustees, the Chief Information Officer at Regional West Medical Center and from our staff.

The project team will consist of:

Project Leader:	Julie Schnell, Director of Clinic Services--will oversee implementation of the project
Clinical Team:	Dr. Dariusz Listopadzki, Deb Thompson, LPN—will recommend set-up of clinical systems, protocols of care, assist in developing any new policies and procedures and lead clinical staff in conversion to electronic formats
Admin Team:	Etta Riker, Business Office Manager—will be responsible for coordinating input/conversion of patient insurance and billing information, registration procedures, and training of clerical staff. Cindy Kennedy, Health Information Clerk—will be responsible for transferring patient information into new system via scanning, input, or as determined by Medical Staff, as well as archiving old paper records for easy retrieval if necessary.
IT Team:	Nicole Neilan, Director of Information Systems—will be responsible for on-site installation, configuration and on-going maintenance of hardware and software, in conjunction with the vendor of choice. Susan Heider, Chief of Information Services, RWMC—will assist in coordinating efforts to interface to regional hospital systems as needed Vendor of Choice IT members—will provide turnkey system in coordination with above team members to ensure a fully operational and functional system within the project timeframes.
Facilities:	Dale Moore, Director of Facilities—will be responsible for all necessary electrical needs, moving of equipment and archiving old records.

Timeline and Milestones

May

- Selection of vendor (Milestone)
- Initial systems review with vendor
- Windows training for all staff

June

- Deployment planning
- Project meeting and tasks assigned
- Issue Hardware purchase order

July

- Hardware delivered to vendor for configuration/installation of software

- System tested at vendor location
- Installation on-site
- Processes reviewed and redefined

August
- Data conversion initiated
- Training begins
- Pertinent records scanned and/or digitized
- Practice management piece operational (Milestone)

September
- Clinical pieces initiated
- Providers begin training
- Two patients/per day/per provider seen using EMR
- All allergy information digitized

October
- Six patients/per day/per provider seen using EMR
- All immunizations in children under 18 digitized
- All script refills, orders, etc. entered through system

November
- Diabetes project information digitized
- Ten patients/per day/per providers seen using EMR

December
- All patients seen using EMR (Milestone)
- All training completed

January
- Begin archiving paper charts
- Days in A/R under 60

System training will be done by vendor staff and through “train-the-trainer” of the project team members. Windows training will be done in-house by the IT staff, through on-line training, and through the local community college as available. Maintenance and on-going support requirements for the system software will be handled through the vendor with a monthly support agreement. Maintenance and on-going support for any additional software, an integration to hospital systems will be handled through our IT department in conjunction with Regional West Medical Center.

Section VII: Technical Impact

This project will replace our present system. Our current practice management system consists of an older UNIX server with five terminals and is a closed system in that all changes must be done through the vendor who has the source code (at substantial cost). Our in-house IT staff does not have training in maintaining and troubleshooting UNIX systems. Staff must

share terminals and physicians cannot currently access the system. In addition, we have a wireless network with five computers that allow selected staff to access the Internet and the local hospital. Of the five computers, our four providers share access to a laptop, nursing staff must share with administrative staff.

The new system will consist of new hardware in a local area network with workstations and/or pen computers for all staff, modems, and scanners. The server will be a Raid 5 server with hot-swappable drives and redundant power supplies. New practice management software and the addition of charting software is included, as well as faxing software to facilitate script writing/refills, and backup software to ensure data protection. We will continue to use the wireless network to connect to the hospital system. The strength of this system is that we have local support capability available, both in-house and in town, for the Microsoft products. The regional hospital also can help us with support and troubleshooting, if need be.

Also, the system we have proposed will allow us to improve security of medical records, as well as the ability to audit that security, and will allow us to grow as needed. All software operates on the Microsoft platform of Windows 2000 and Microsoft SQL. The software supports the industry standard HL7 Version 2.3 and the database is ODBC compliant, allowing integration with outside sources such as labs and hospitals.

Section VIII: Risk Assessment

Possible risks with implementing this project have been evaluated and are believed to be acceptable. The greatest risks to the project have been identified as:

1. Key Personnel leaving—this would include members of the project team and clinic staff. Bringing new staff on-board during a project of this magnitude could place the project at risk. However, the project has been discussed at length, and we have staff support. The project team leader is committed to remaining until the project is implemented and operating smoothly.

2. Poor Support/Training from Vendor—this is the greatest risk as having the installation, training, and transition go smoothly is a must. We have tried to minimize the risk by speaking with other vendor clients and doing reference checks. We have also discussed and committed to selecting a vendor which offers a package that could be supported by other vendors, should the need arise.

3. Disenchantment of system by providers—If the transition does not go smoothly, we run the risk that the health care providers will become dis-enchanted with the system and therefore not invest themselves in using it. We are aware of this possibility and intend to focus all energies on making the transition smooth for these key individuals.

If the project is not completed as proposed, the major impact will be financial as significant cost and efficiency
savings would not be realized. However, completion of even part of the proposed project will result in a better
information system, access to internet resources and communication tools such as email.

Section IX: Financial Analysis and Budget (Required)

Provide the following financial information:

	CTF Grant Funding	Cash Match (5)	In-Kind Match (6)	Other Funding Sources (7)	Total
Personnel (1)	20,000		48,582		68,582
Contractual Services					
Design					
Programming and Testing					
Project management, evaluation, and quality assurance					
Other (2)			15,000		15,000
Capital expenditures (3)					
Hardware	17,500	17,500	8,500	35,000	78,500
Software Acquisition	20,000	20,000		35,000	75,000
Networks		5,000	5,000		10,000
Other					
Other Costs					
Telcommunications					
Supplies and material					
Other operating					
Travel		5,000			5,000
TOTAL	57,500	47,500	77,082	70,000	252,082

Financial Narrative Notes:
Item 1: Estimated Hours by Position

Project Team	# of Hrs/Week	Weeks	Total Hours
Project Leader	25	40	1000
Physician-Clinical Team	10	40	400
LPN-Clinical Team	10	40	400
Business Office Manager	15	40	600
Medical Records Clerk	30	40	1200
IT Staff	15	40	600

Facilities	2	40	80

Costs reflected are only for direct salary, and do not include any benefits.

1. Please itemize other contractual expenses on separate sheet
2. Please itemize capital expenditures by categories (hardware, software, network, and other) on a separate sheet.
3. Please itemize other operating expenses on a separate sheet.
4. Please indicate the source of any cash match.
   - The cash match will come from cash reserves of Kimball County Hospital and has been included in the current year budget.
5. Please indicate the source of any in-kind match and how it will be documented.
   - The source of all in-kind matches will be Kimball County Hospital. Each individual employee will document the in-kind match for the time spent on the project. Costs of existing equipment being utilized for the project can be documented by asset listings, etc.
   - The total grant request is for just over 23% of the total project cost. Kimball County Hospital will provide 31% as in-kind contributions of salaries, equipment, and support.
6. Pease provide a breakdown of any other external funding sources. Sources of external funds may include grants from federal agencies or private foundations.
   - External Funding Source includes $70,000 already approved and committed by the Kimball County Hospital Foundation.

Financial Narrative Notes:
Item 2: Other contractual expense consists of $15,000 of training, configuration, and conversion costs.
These costs include:

Training—Practice Management	$ 2,500
Training—Clinical/Charting	$ 5,700
Configure Workstations/Integration	$ 4,300
Converting patient database	$ 2,500
Total	$15,000

Financial Narrative Notes:

Item 3: Capital Expenditures

Hardware:

1 Server, Raid 5	18,100
7 PC Workstation (Pentium III)	8,630
8 Pen Computer	46,220
2 Transmitters	3,700
1 Desktop Scanner	400
1 Flatbed Scanner	700
1 10/100 Server Switch	750
	=78,500

Software:

2 EMR & PM per MD	29,000
2 EMR & PM per MD	20,000

1 HL7 Lab interface	4,000
1 Electronic Remittance	4,000
1 2000 Server--10 users	1,370
3 200 Server--add'l licenses	230
1 Microsoft SQL --10 users	2,400
3 Microsoft SQL --add'l licenses	500
1 Report Writer	3,500
1 Faxing software	2,500
1 Back up Software	800
1 Exchange Server	6,700
	=75,000

Network Costs:

1 Wireless antennae	125
1 DSL Modem	500
1 Hub	50
1 Wireless radio	500
1 UPS	500
Remote maintenance, interface programming, integration of existing system, anti-virus additional licenses	8,325
	=10,000

Financial Narrative Notes:

Item 4: Other Operating Expenses

- Travel expenses to include travel, lodging and meal expenses of vendor personnel on-site for installation and training